

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

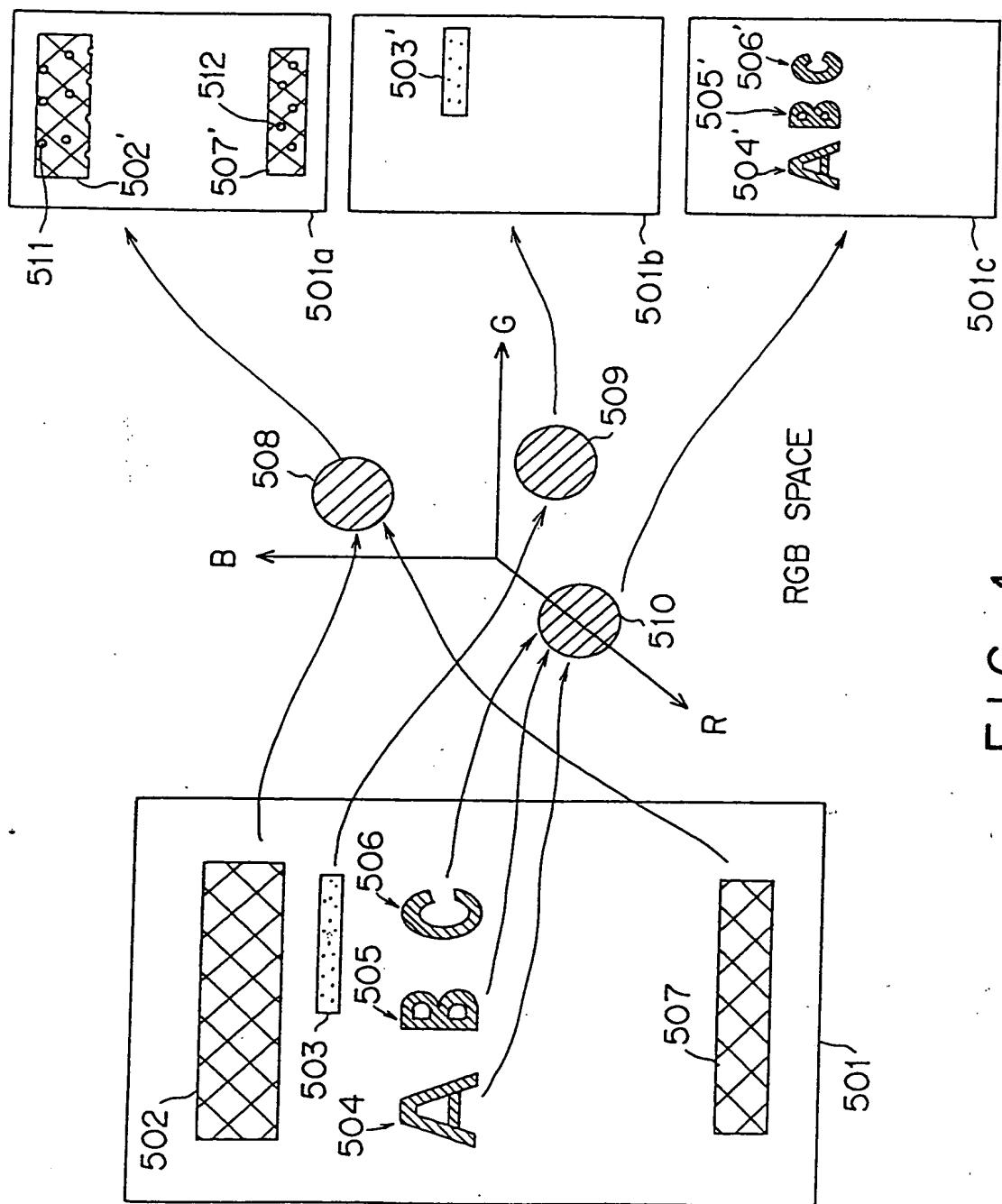


FIG. 1

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

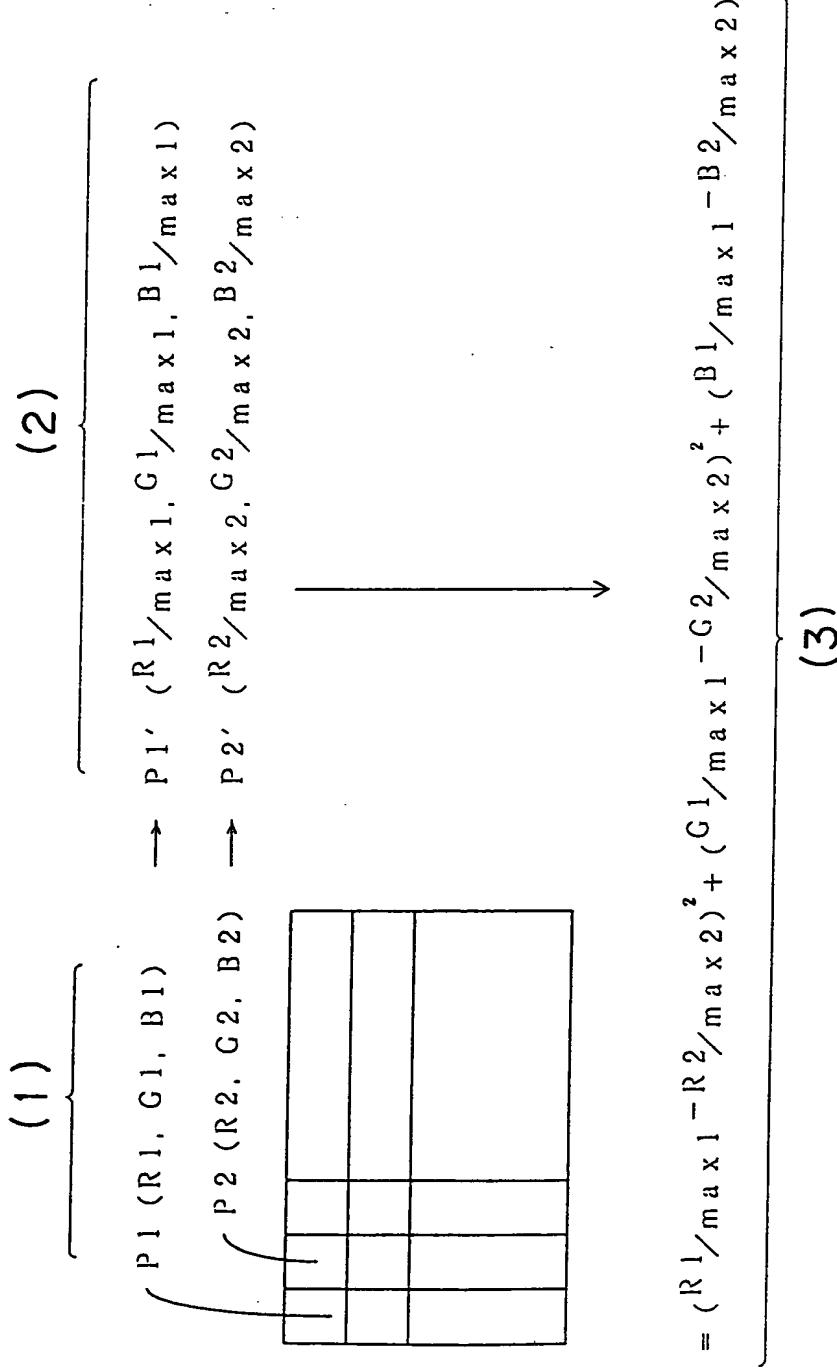
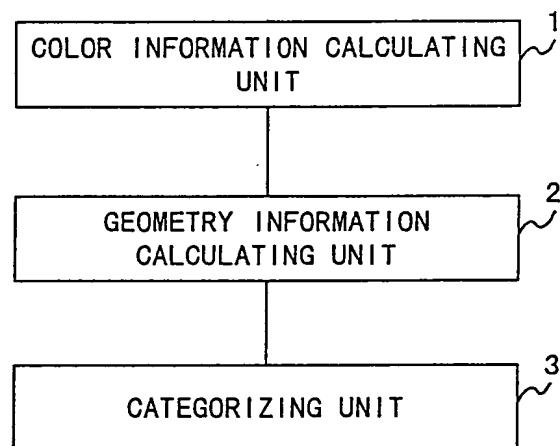


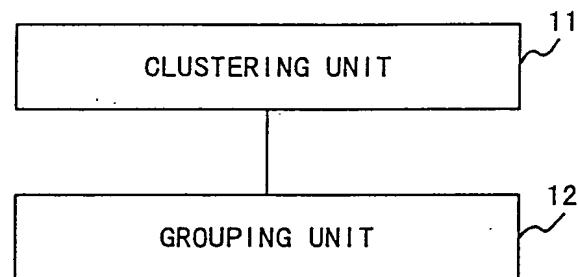
FIG. 2

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



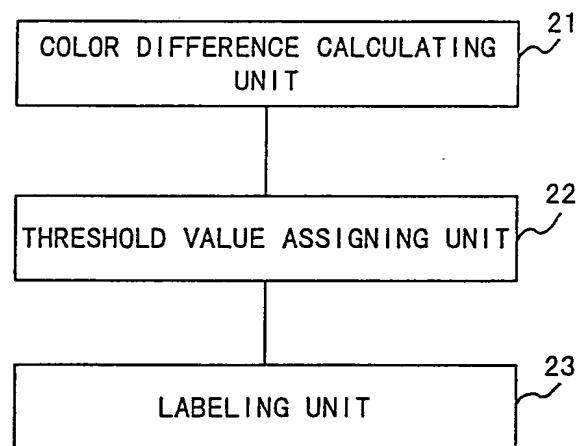
F I G. 3

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



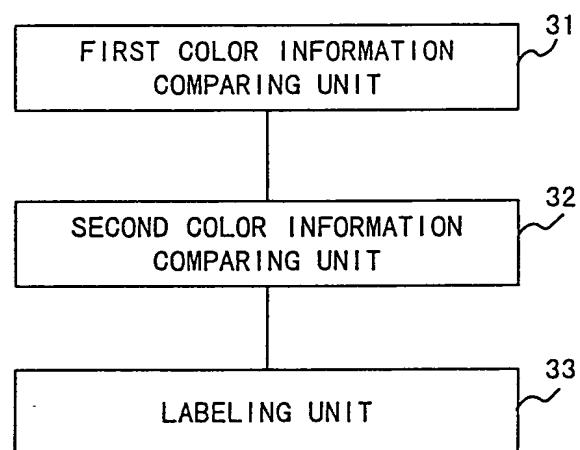
F I G. 4

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



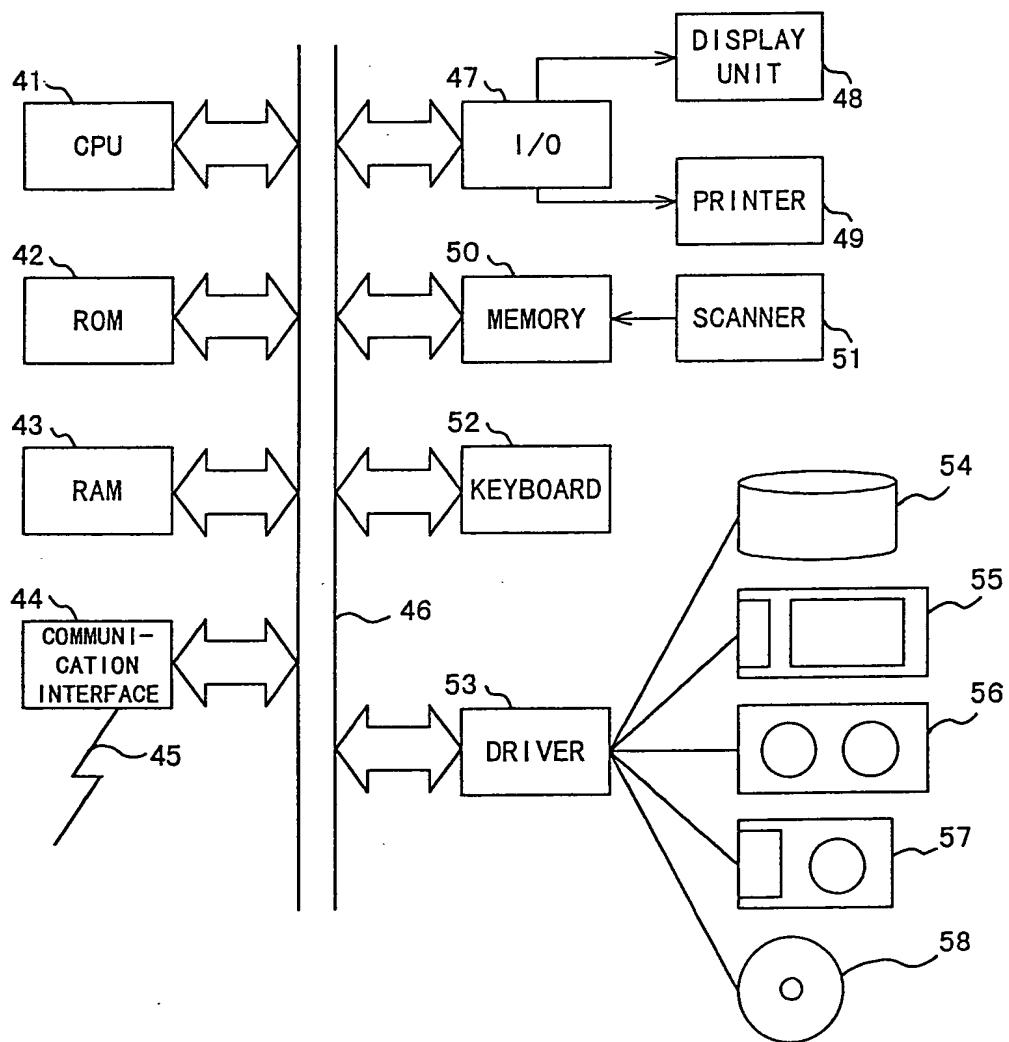
F I G. 5

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



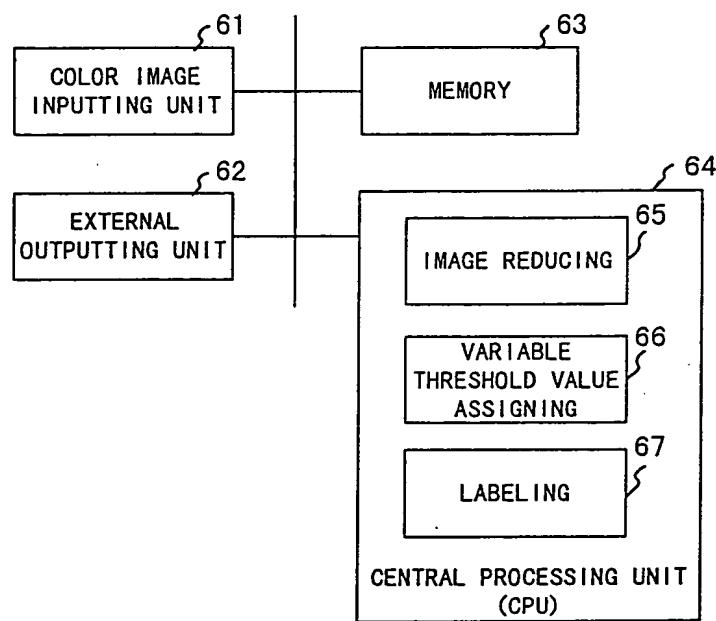
F I G. 6

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



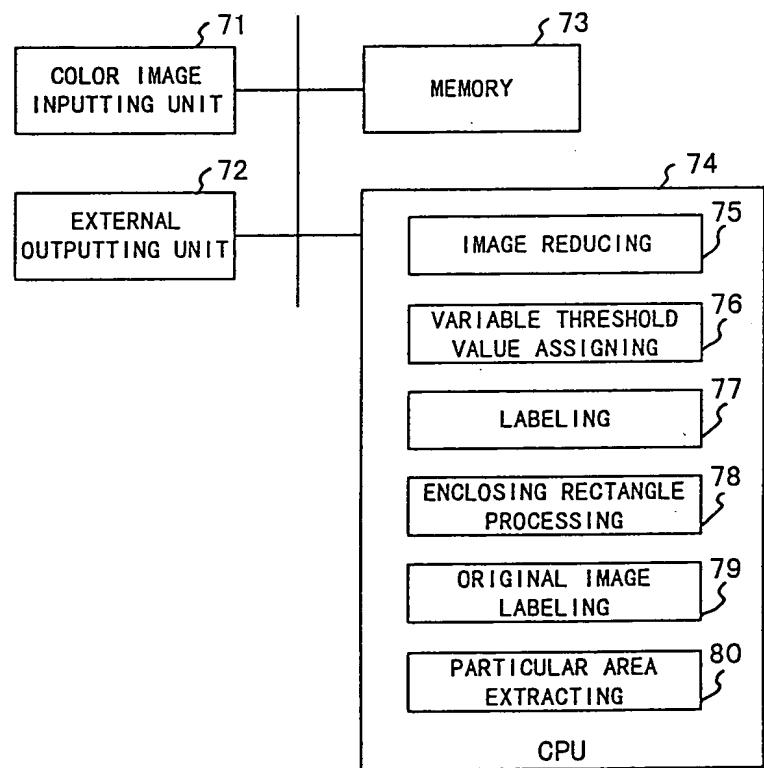
F I G. 7

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



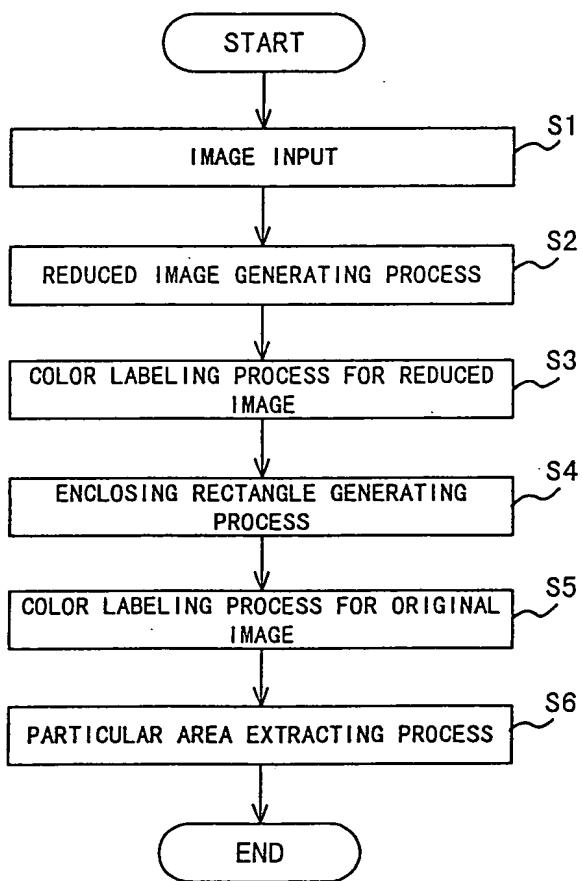
F I G. 8

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



F I G. 9

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



F I G . 1 0

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

REDUCTION RATIO 1/3

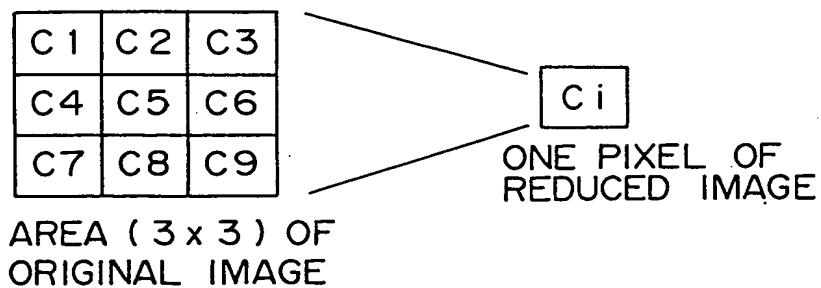


FIG. 11A

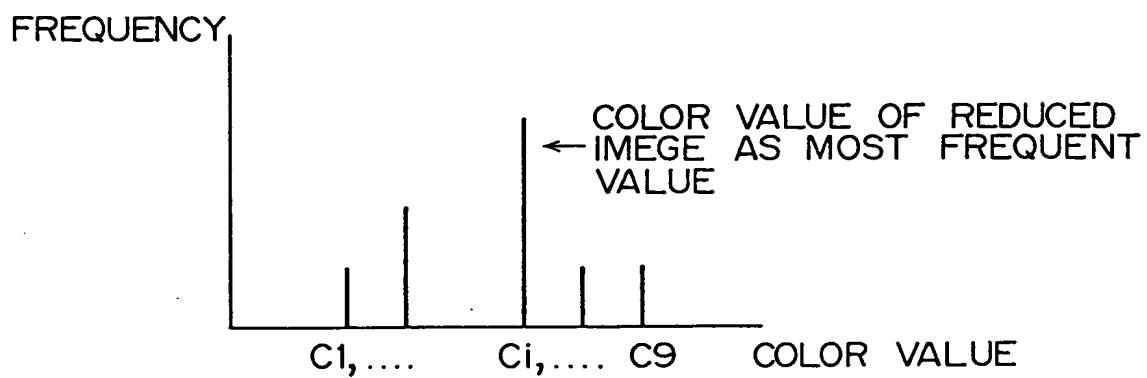


FIG. 11B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

1	2	3
8	C	4
7	6	5

C : CONSIDERED PIXEL. COLOR VALUE (R_c, G_c, B_c)

1 ~ 8 : EIGHT PIXELS ADJACENT TO CONSIDERED
PIXEL

COLOR VALUE (R_i, G_i, B_i) i = 1 ~ 8

FIG. 12A

do i = [0 if | R_c - R_i | < R_{th} and
| G_c - G_i | < G_{th} and
| B_c - B_i | < B_{th}
LARGE VALUE SUCH AS
1000 : OTHERWISE
(ANY VALUE LARGER THAN
THRESHOLD VALUE th)]

FIG. 12B

TITLE: COLOR IMAGE PROCESSING
 APPARATUS AND PATTERN EXTRACTING
 APPARATUS
 INVENTORS: Yutaka KATSUYAMA
 SERIAL NO.: Unassigned
 DOCKET NO.: 826.1526D

ENTRY	THRESHOLD VALUE
(R1, G1, B1)	(Rth1, Gth1, Bth1)
(R2, G2, B2)	(Rth2, Gth2, Bth2)
:	:
(R _i , G _i , B _i)	(R _{thi} , G _{thi} , B _{thi})
:	:
(R _N , G _N , B _N)	(R _{thN} , G _{thN} , B _{thN})

FIG. 13A

ENTRY	THRESHOLD VALUE
R1 ~ R4	Rt1
R5 ~ R8	Rt2
:	:
:	:
RN-3 ~ RN	RtM

R

ENTRY	THRESHOLD VALUE
G1 ~ G4	Gt1
RG ~ G8	Gt2
:	:
:	:
GN-3 ~ GN	GtM

G

ENTRY	THRESHOLD VALUE
B1 ~ B4	Bt1
B5 ~ B8	Bt2
:	:
:	:
BN-3 ~ BN	BtM

B

FIG. 13B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

ENTRY	THRESHOLD VALUE
R1 ~ R4	Rt1
R5 ~ R8	Rt2
.	.
.	.
.	.
RN-3 ~ RN	RtM

R'

ENTRY	THRESHOLD VALUE
G1 ~ G4	Gt1
RG ~ G8	Gt2
.	.
.	.
.	.
GN-3 ~ GN	GtM

G'

ENTRY	THRESHOLD VALUE
B1 ~ B4	Bt1
B5 ~ B8	Bt2
.	.
.	.
.	.
BN-3 ~ BN	BtM

B'

F I G. 1 4

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

FIG. 15A

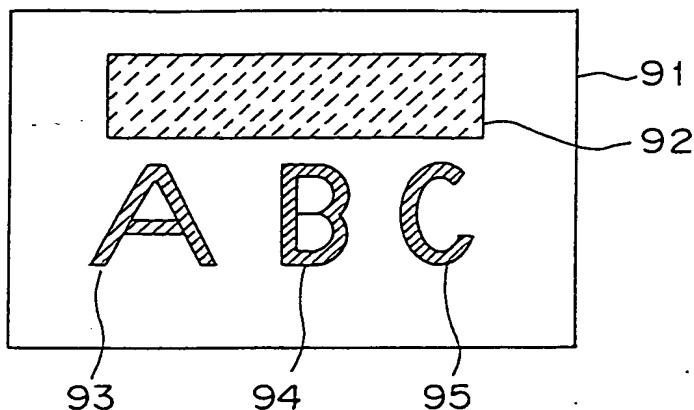


FIG. 15B

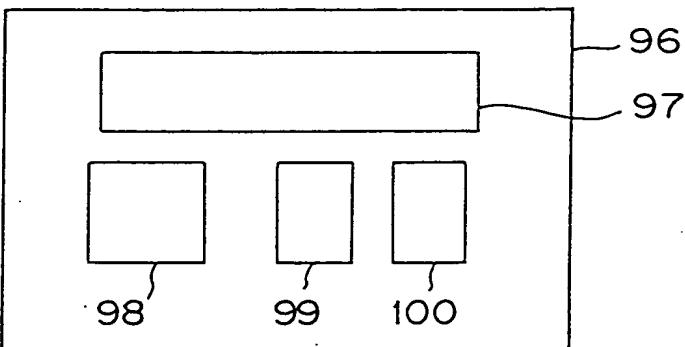
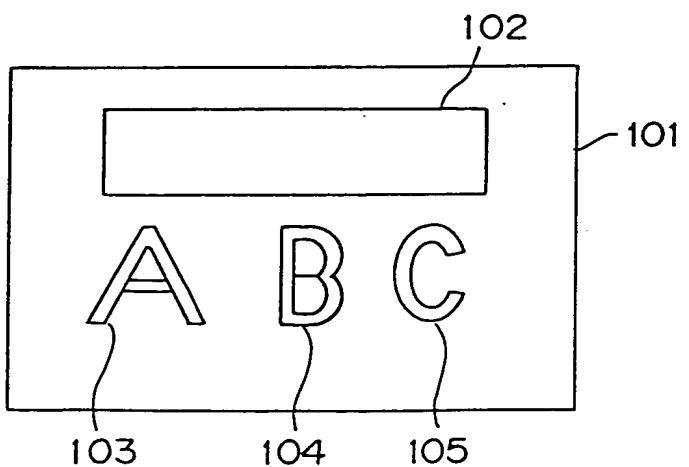


FIG. 15C



TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

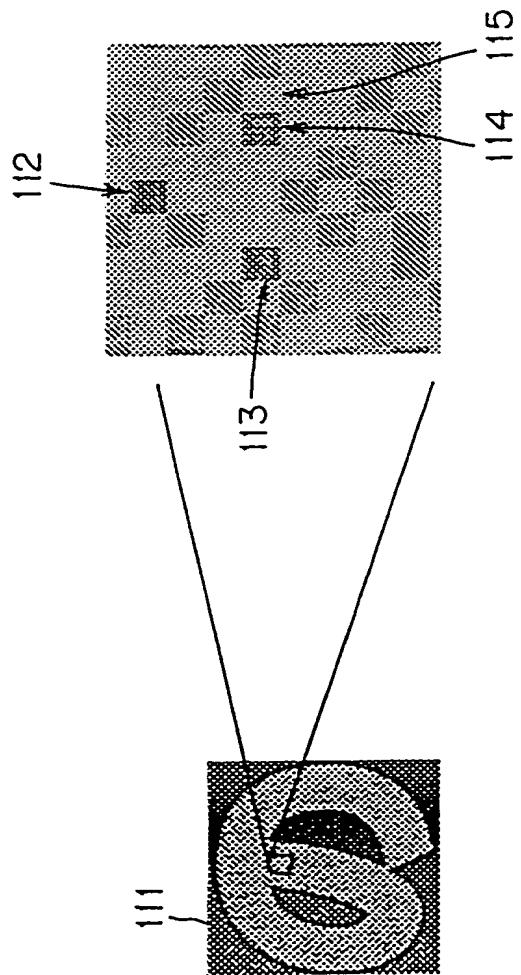


FIG. 16A
FIG. 16B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

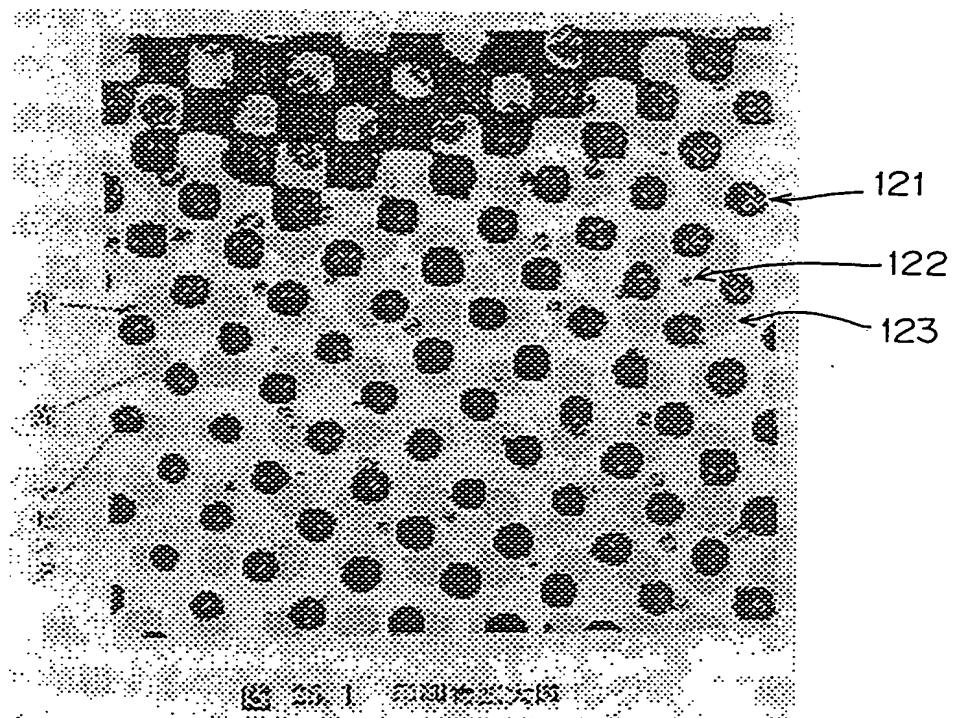


FIG. 17

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

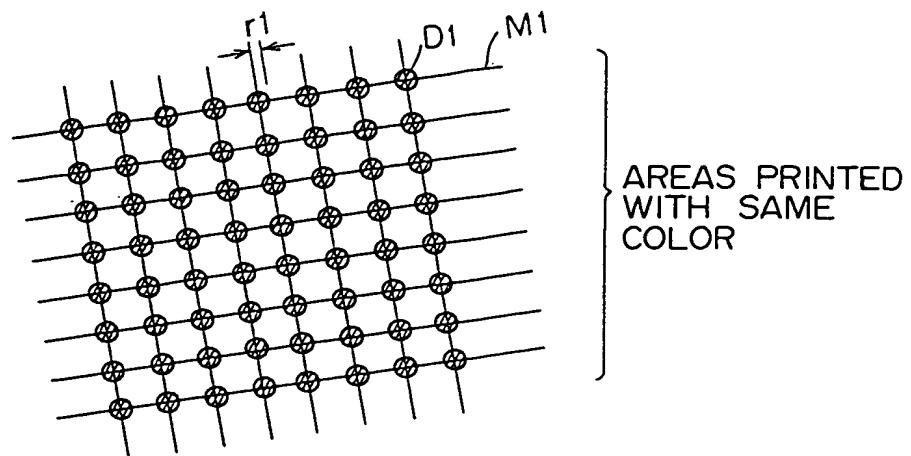


FIG. 18A

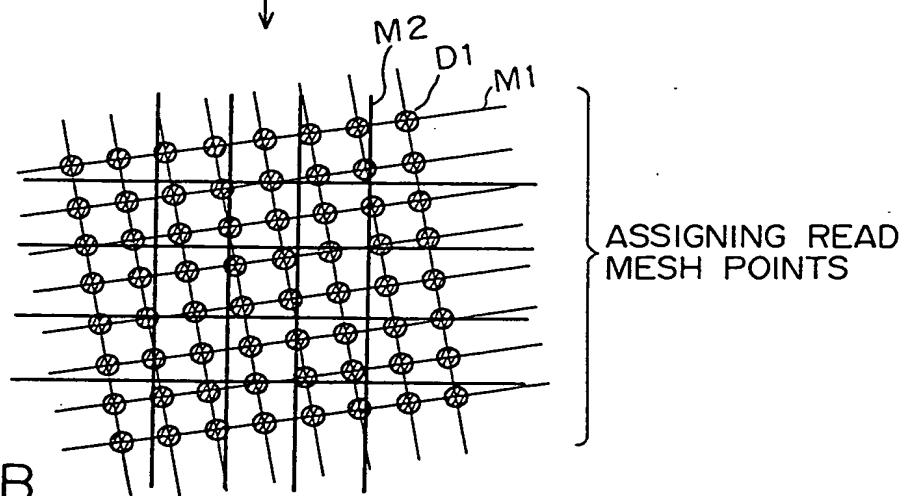


FIG. 18B

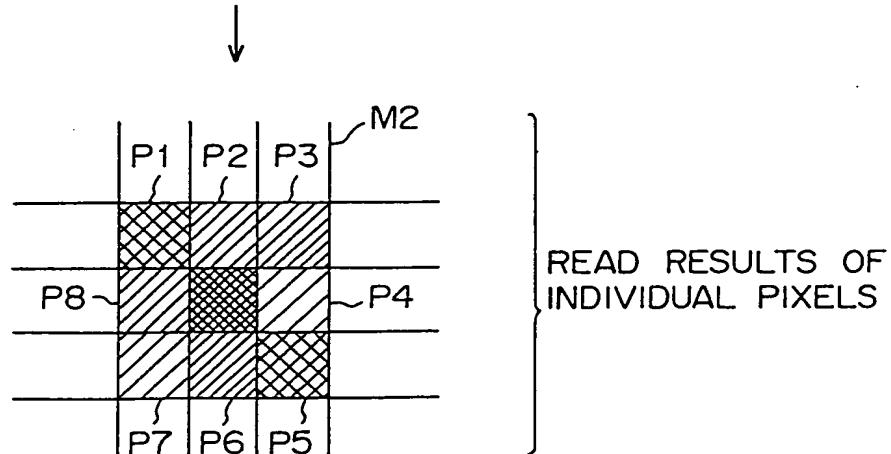


FIG. 18C

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

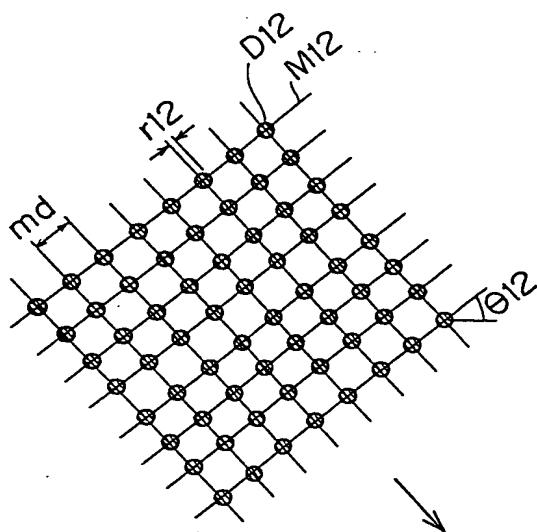


FIG. 19A

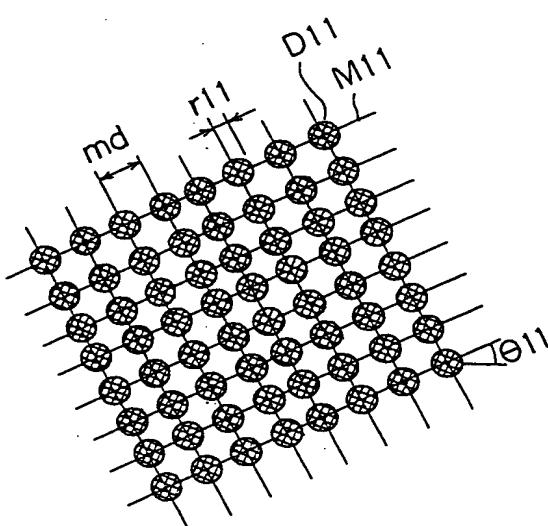


FIG. 19B

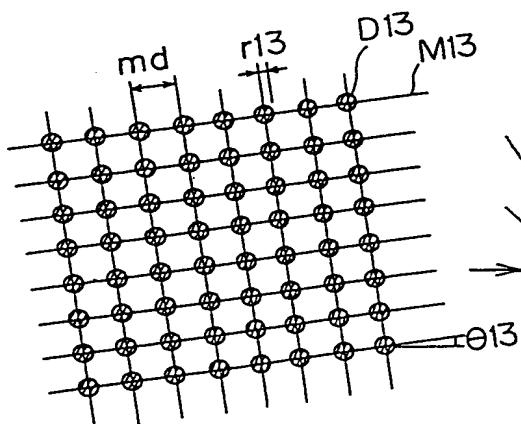


FIG. 19C

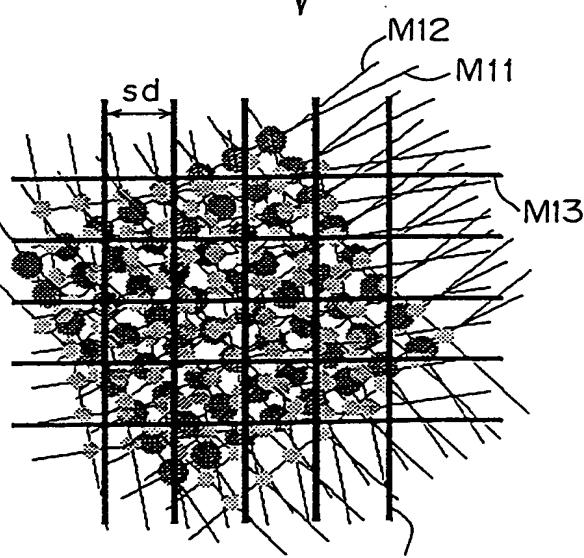


FIG. 19D

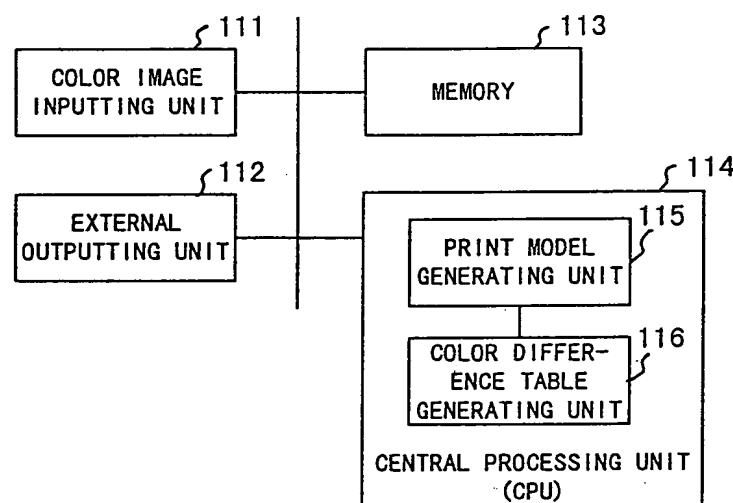
TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

EXAMPLE OF TABLE FOR R (THIS TABLE APPLIES TO
TABLES FOR G AND B)

R LUMINANCE VALUE	MAXIMUM VALUE OF LUMINANCE DIFFERENCE WITH ADJACENT PIXELS	RESOLUTION
0	2	14
0	2	15
0	1	16
:	:	:
0	1	35
3	10	14
3	8	15
3	7	16
:	:	:
3	2	35
:	:	:
:	:	:
255	0	14
255	0	15
:	:	:
255	0	35

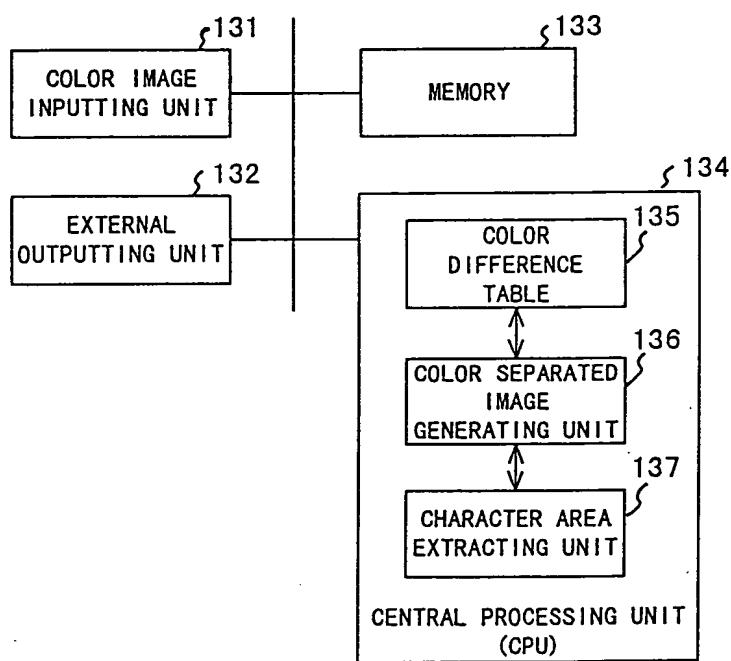
F I G. 20

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



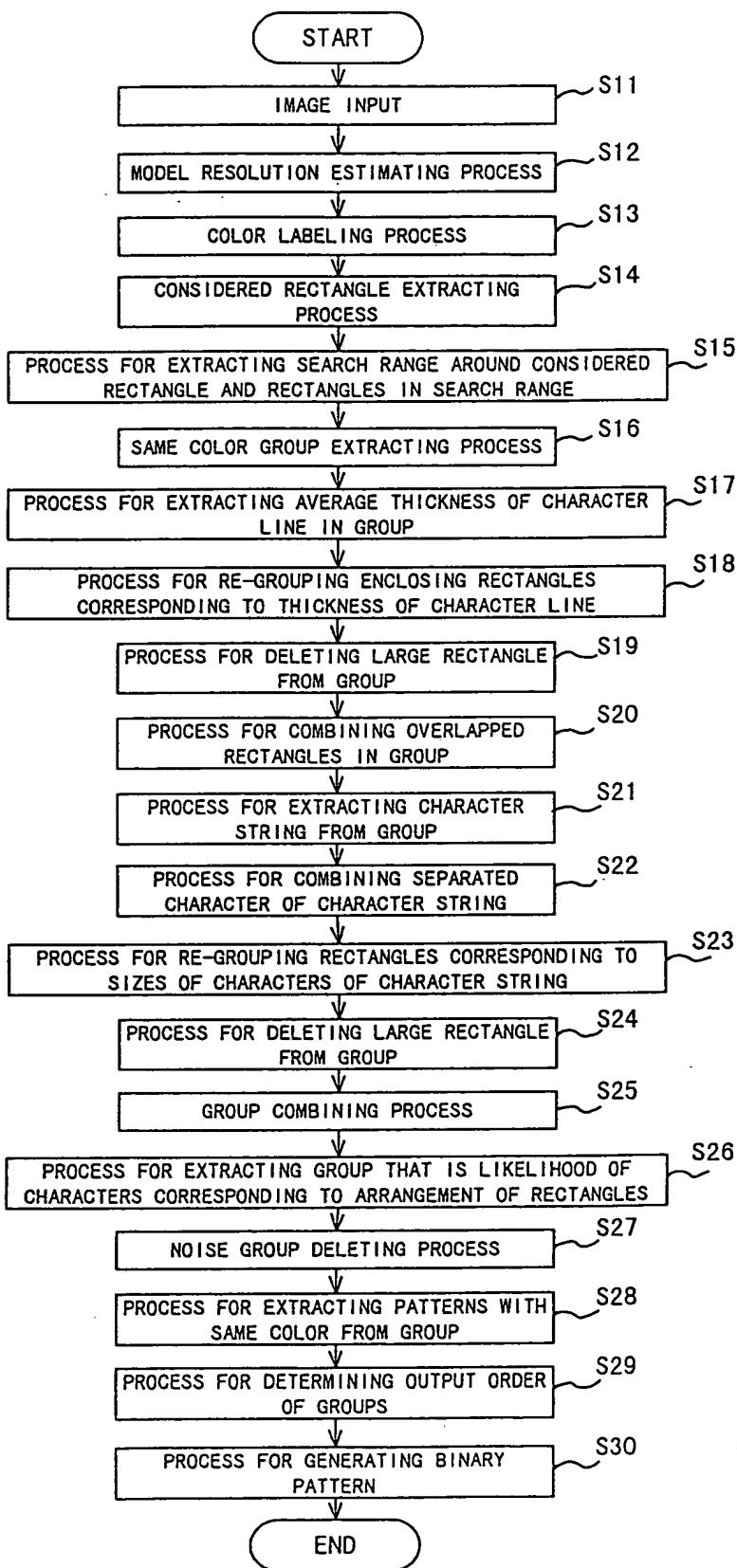
F I G. 21

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



F I G. 22

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



F I G . 2 3

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

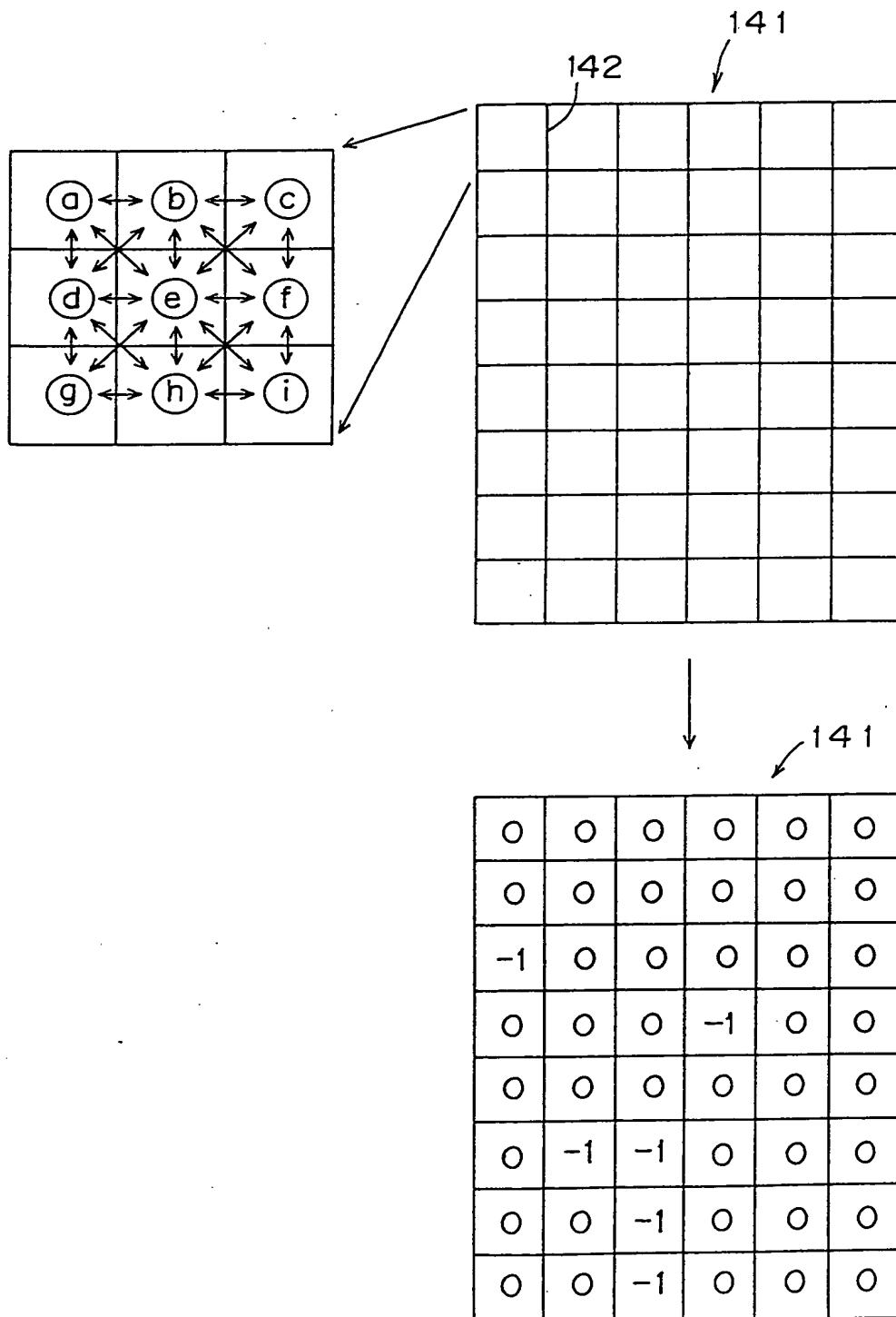
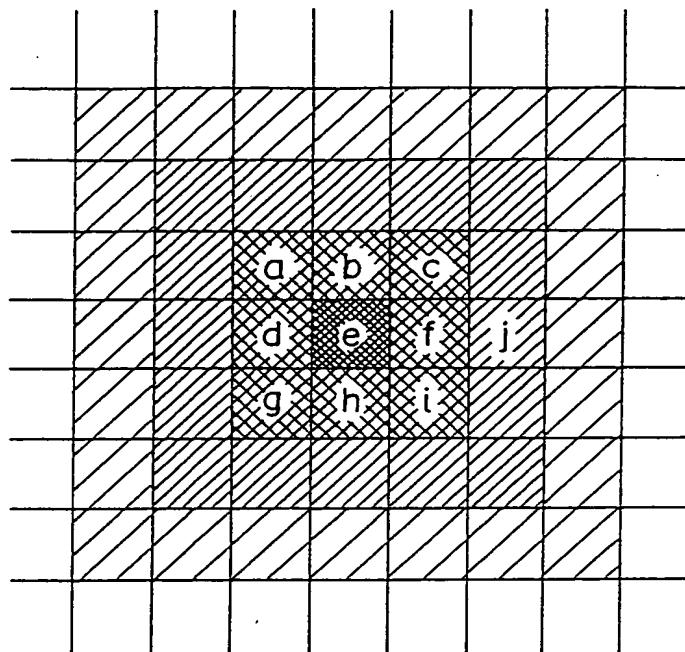


FIG. 24

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



RED ←————— BLACK —————→ RED
GRADUALLY VARYING GRADUALLY VARYING

FIG. 25

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

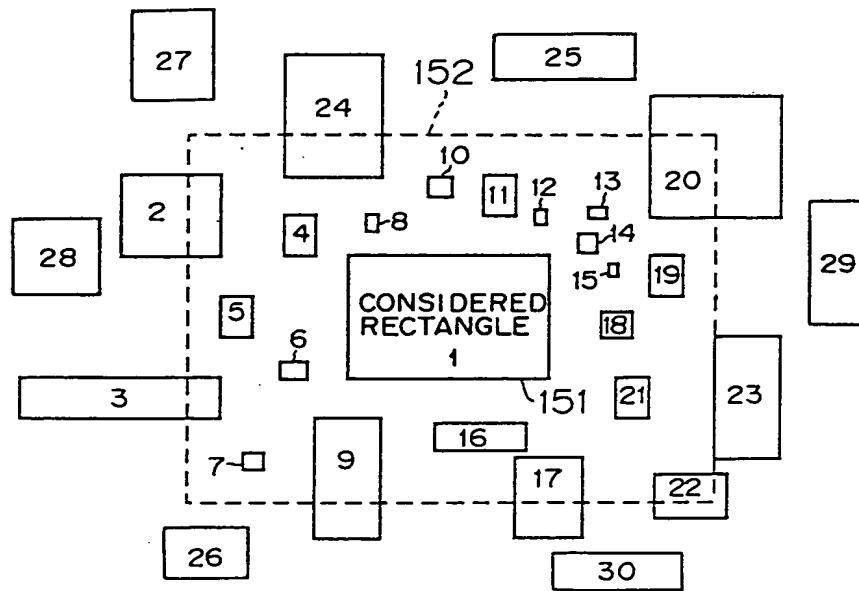


FIG. 26

TITLE: COLOR IMAGE PROCESSING
 APPARATUS AND PATTERN EXTRACTING
 APPARATUS
 INVENTORS: Yutaka KATSUYAMA
 SERIAL NO.: Unassigned
 DOCKET NO.: 826.1526D

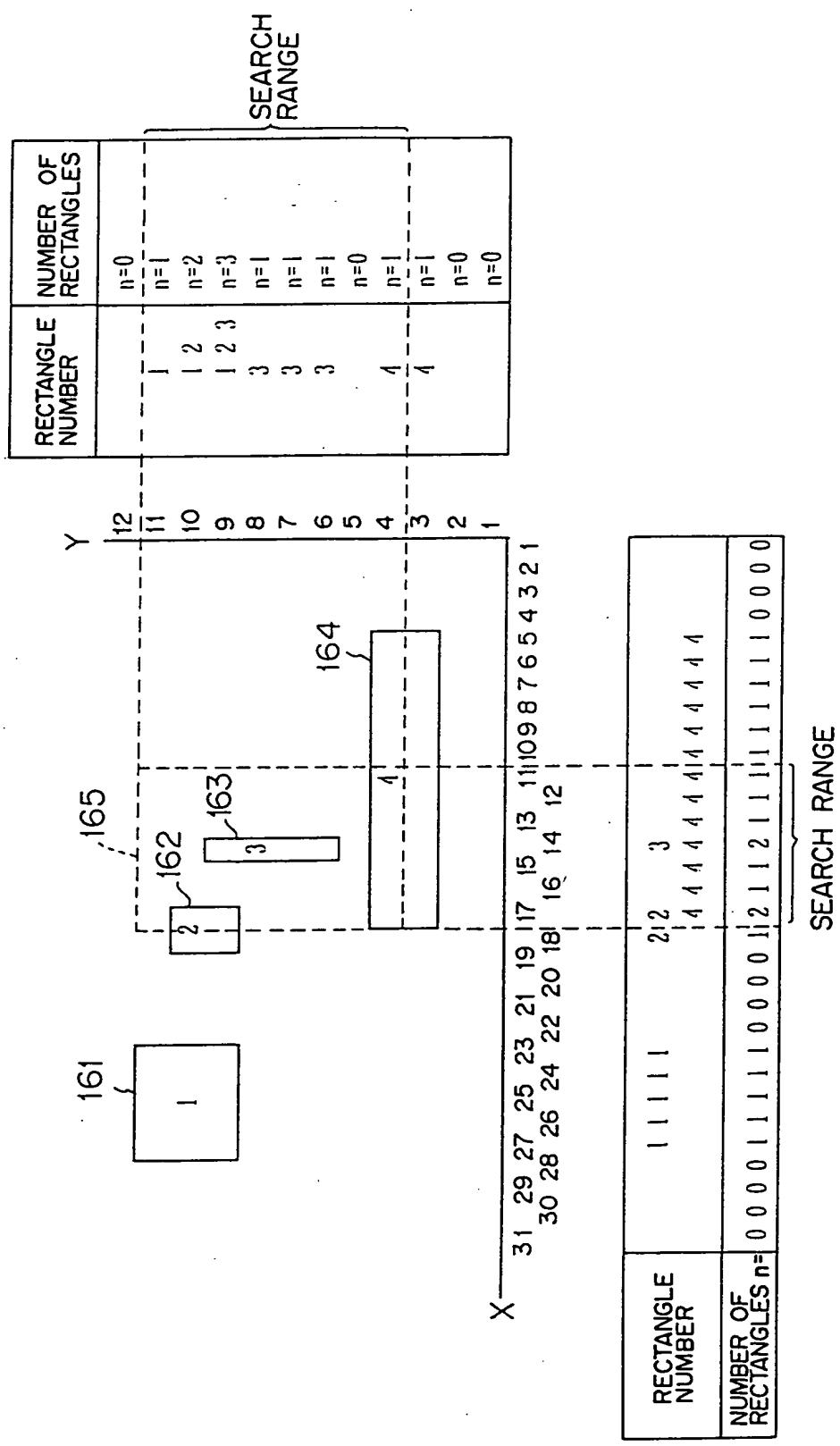


FIG. 27

TITLE: COLOR IMAGE PROCESSING
 APPARATUS AND PATTERN EXTRACTING
 APPARATUS
 INVENTORS: Yutaka KATSUYAMA
 SERIAL NO.: Unassigned
 DOCKET NO.: 826.1526D

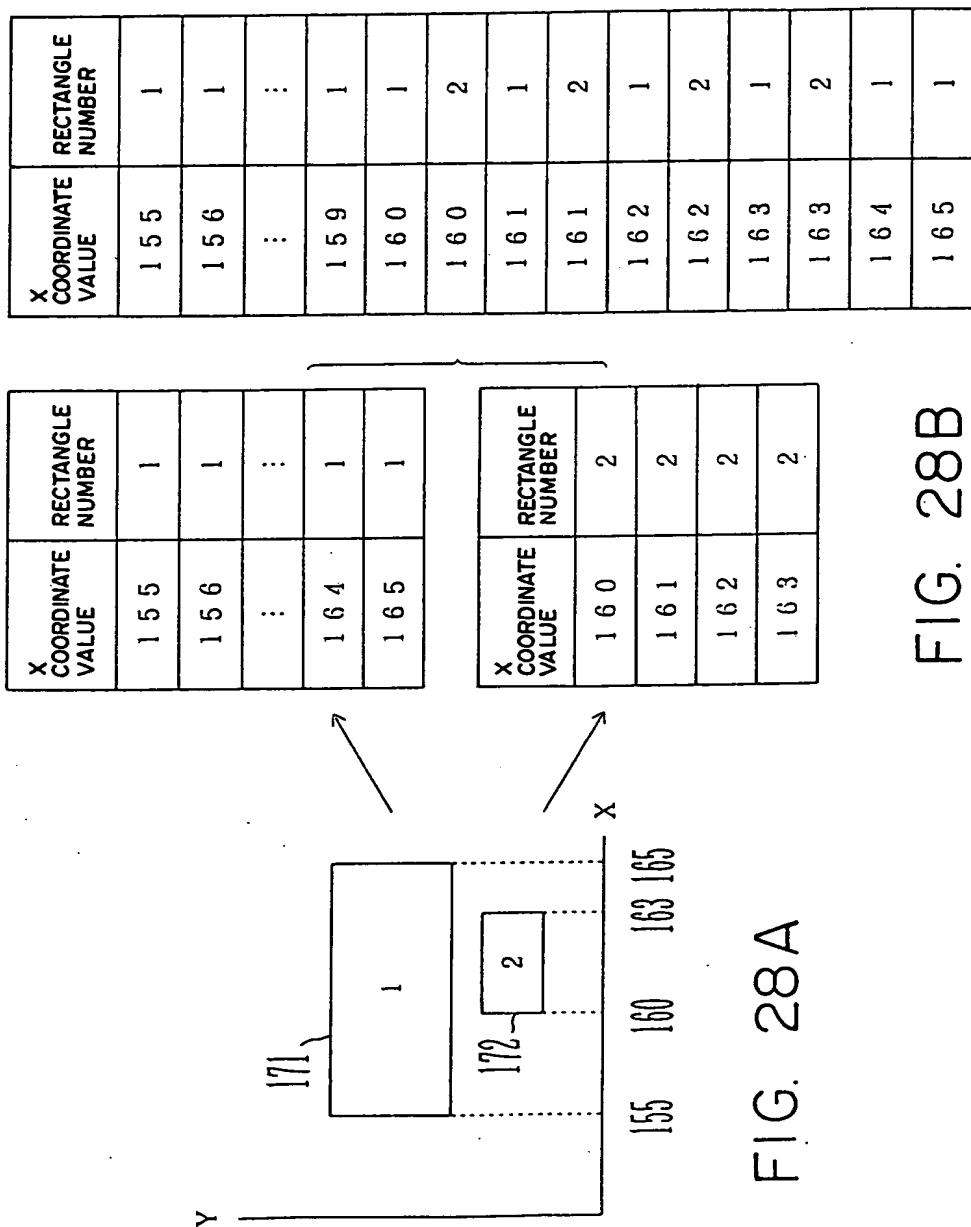


FIG. 28A

FIG. 28B

FIG. 28C

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

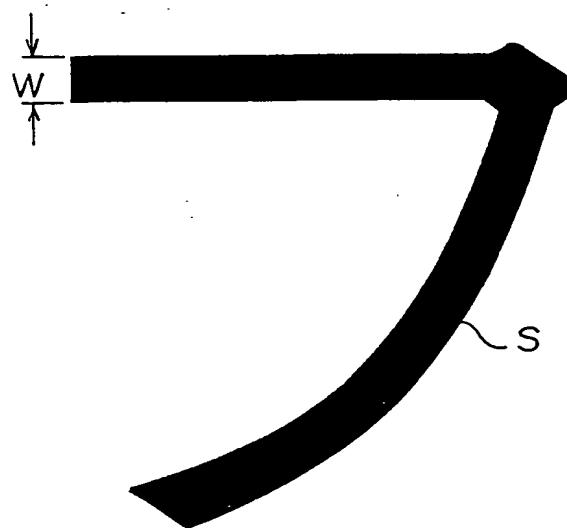


FIG. 29A

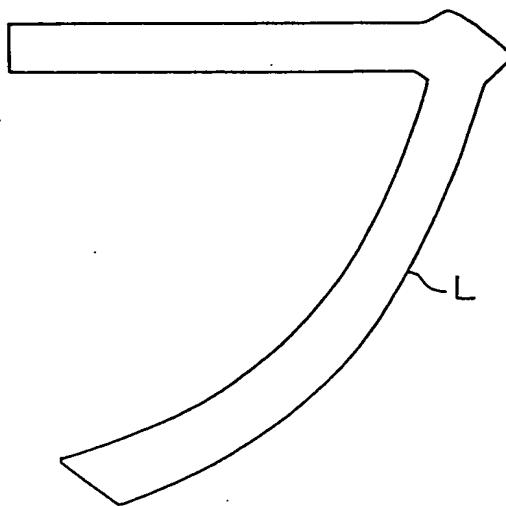


FIG. 29B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

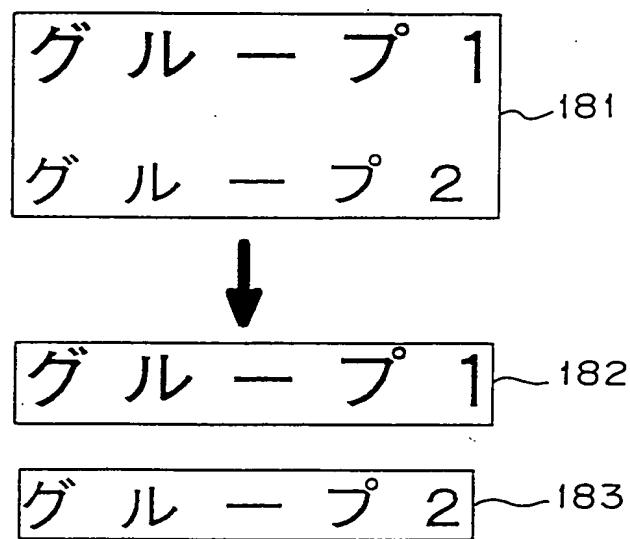


FIG. 30

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

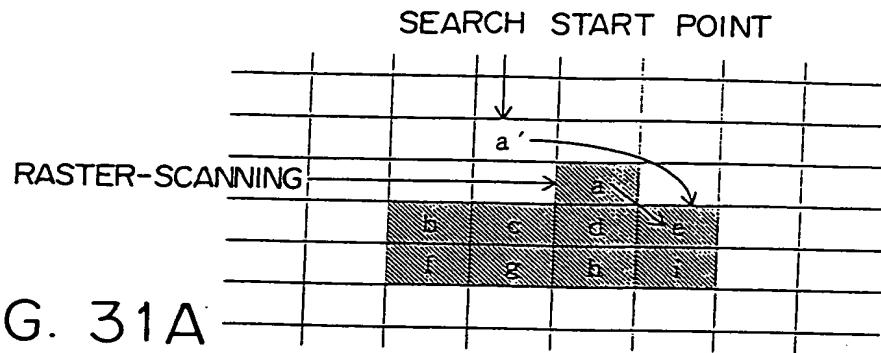


FIG. 31A

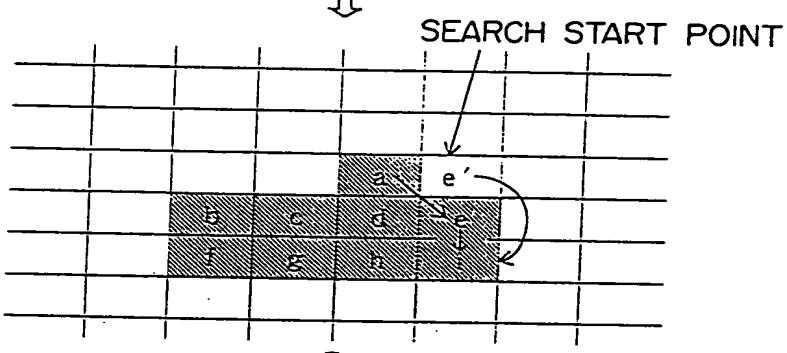


FIG. 31B

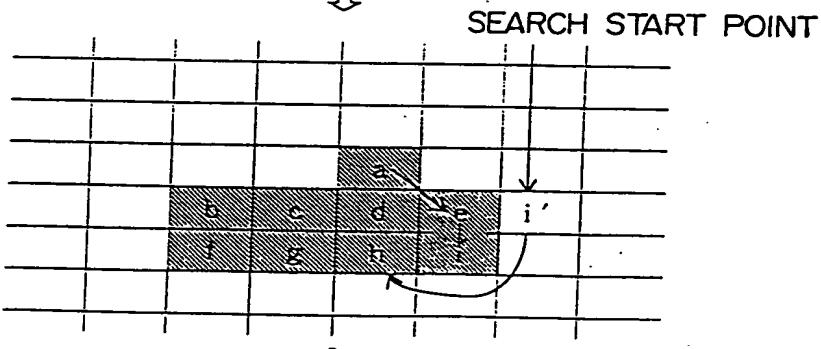


FIG. 31C

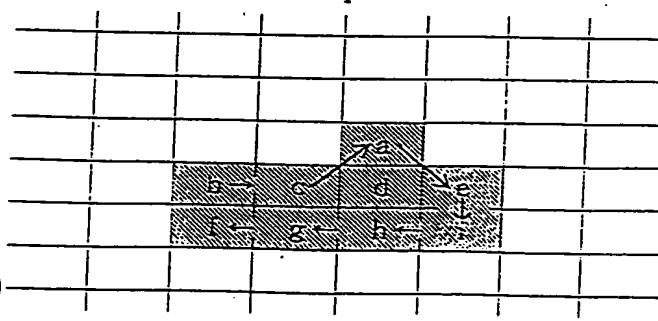


FIG. 31D

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

5	6	7
4	C	0
3	2	1

C : CURRENT PIXEL

0 ~ 7 : PIXELS ADJACENT TO CURRENT PIXEL,
DIRECTION CODE VIEWED FROM PIXEL
C IS DC, PIXELS ARE SEARCHED IN
DIRECTION OF DC

FIG. 32

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

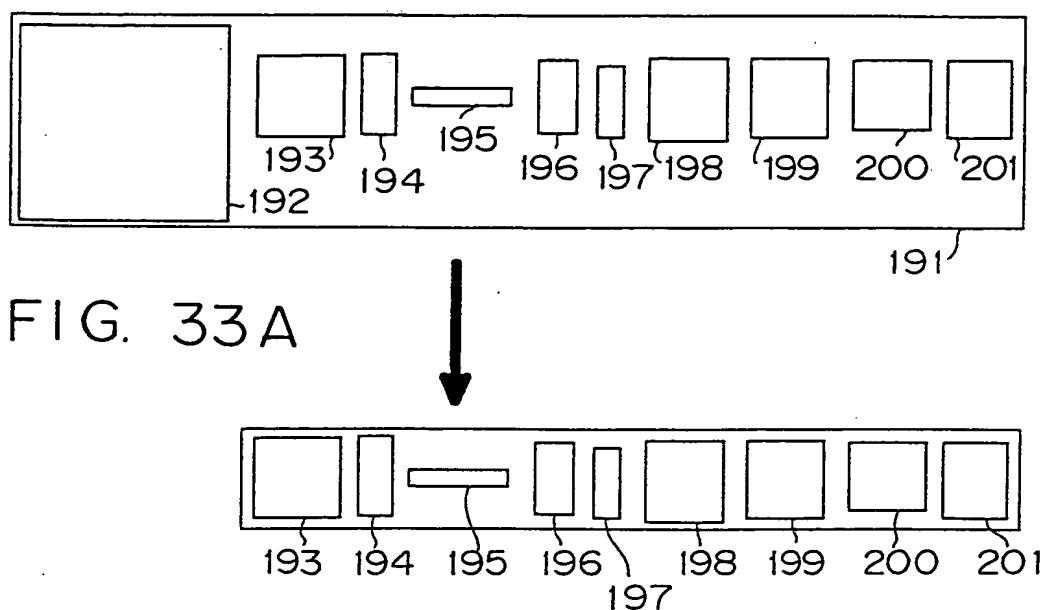


FIG. 33B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

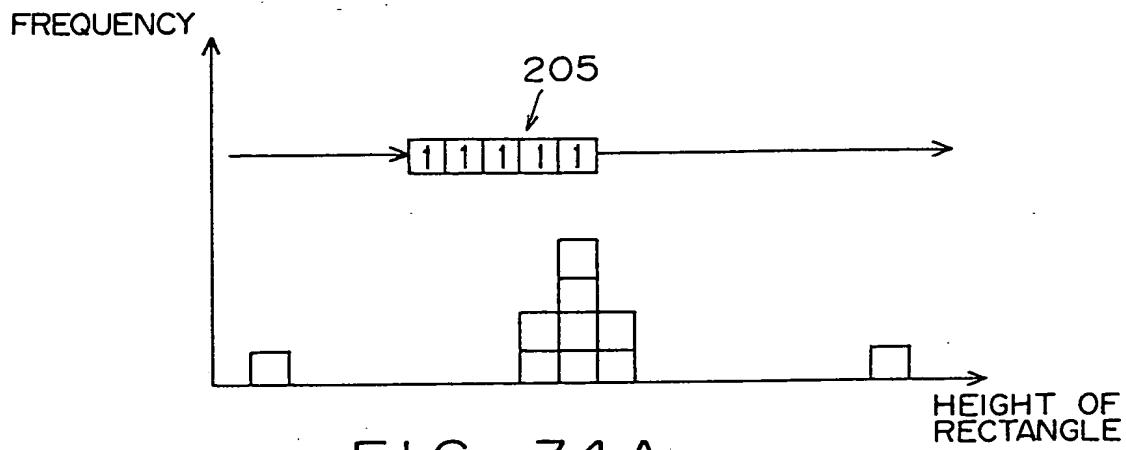


FIG. 34 A

↓ MOVING SUM

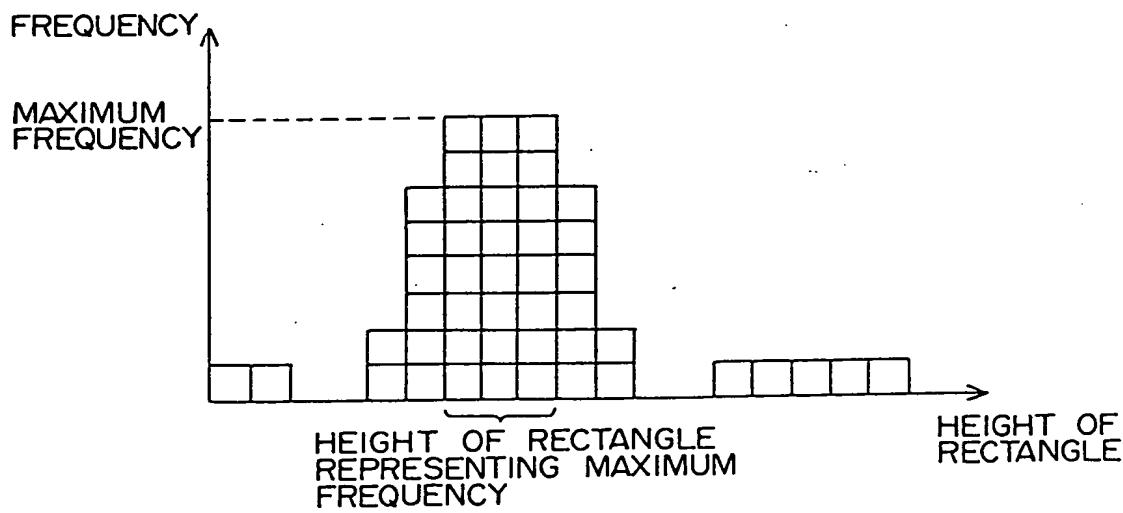


FIG. 34 B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

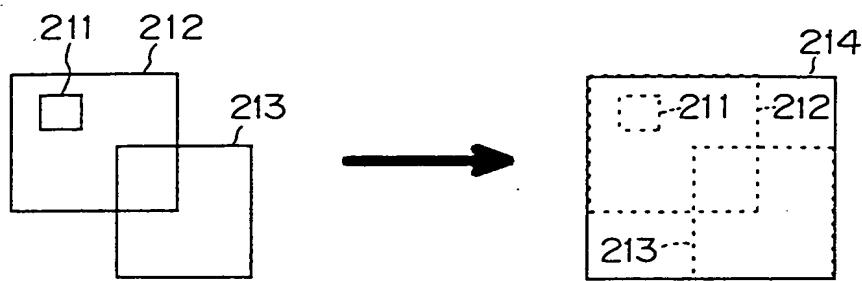
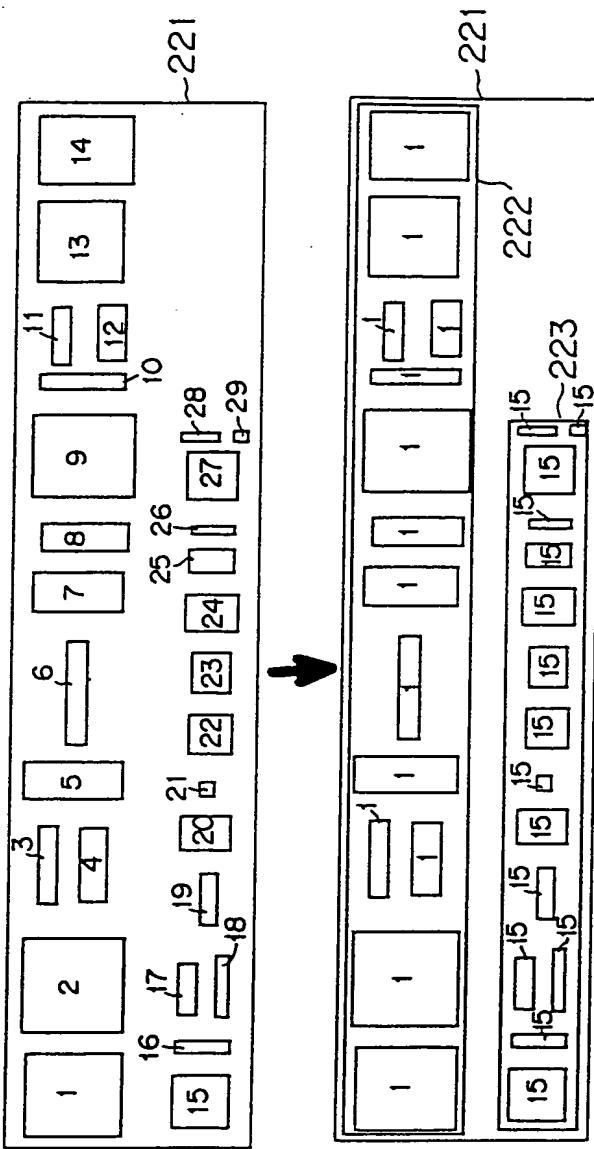


FIG. 35A

FIG. 35B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

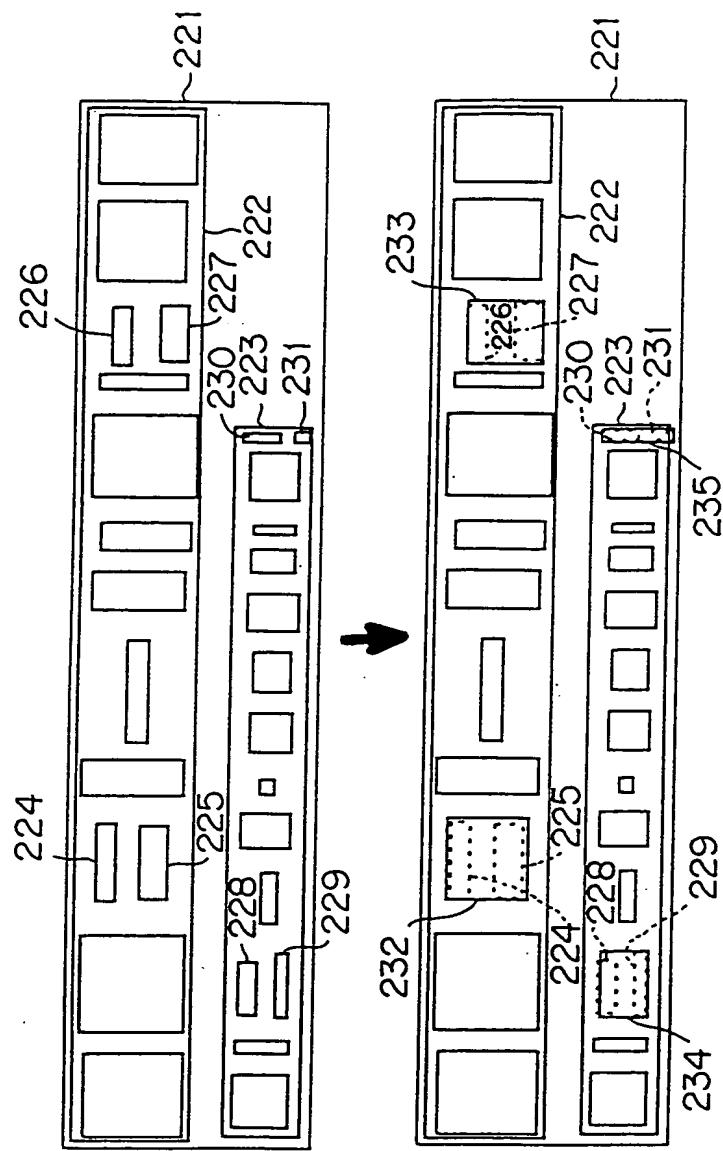


FIG. 37A

FIG. 37B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

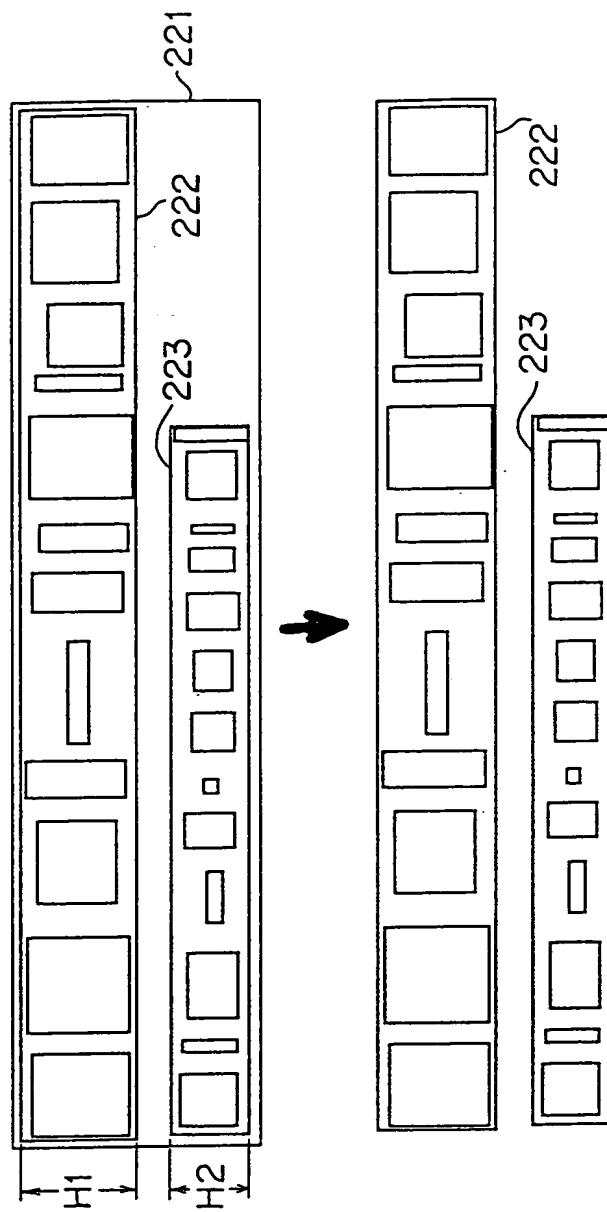


FIG. 38A

FIG. 38B

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

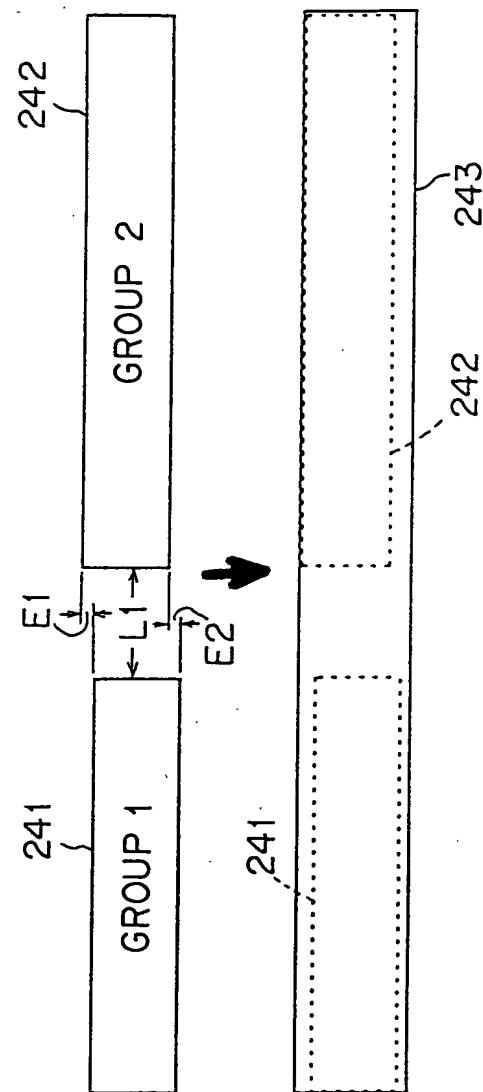


FIG. 39 A

FIG. 39 B

FIG. 40 A

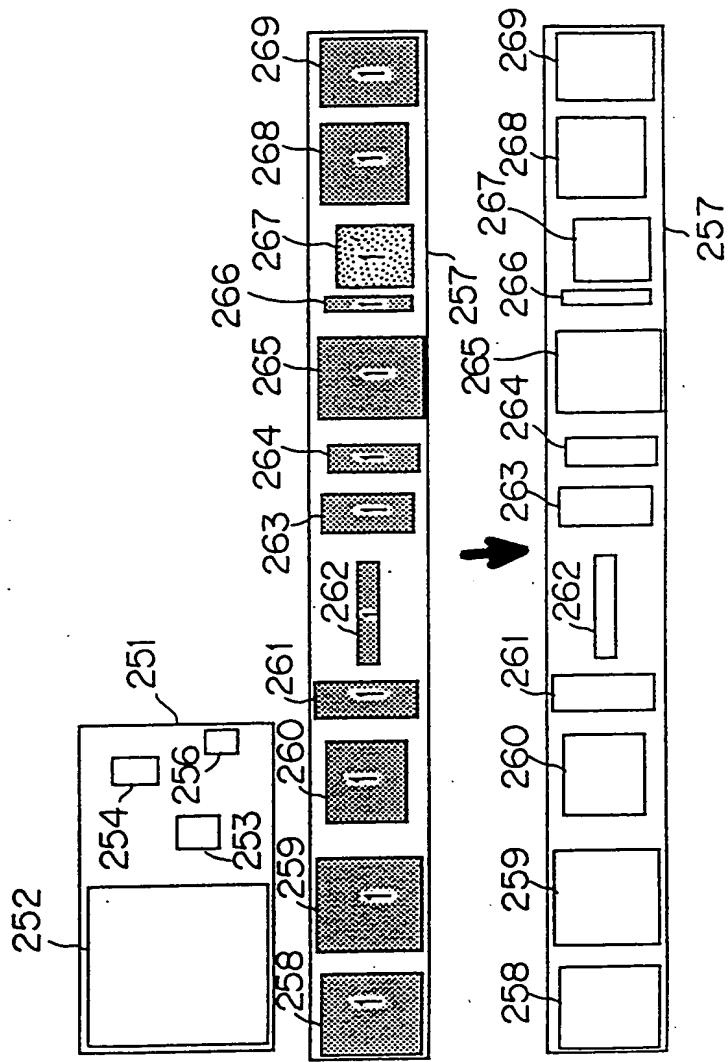
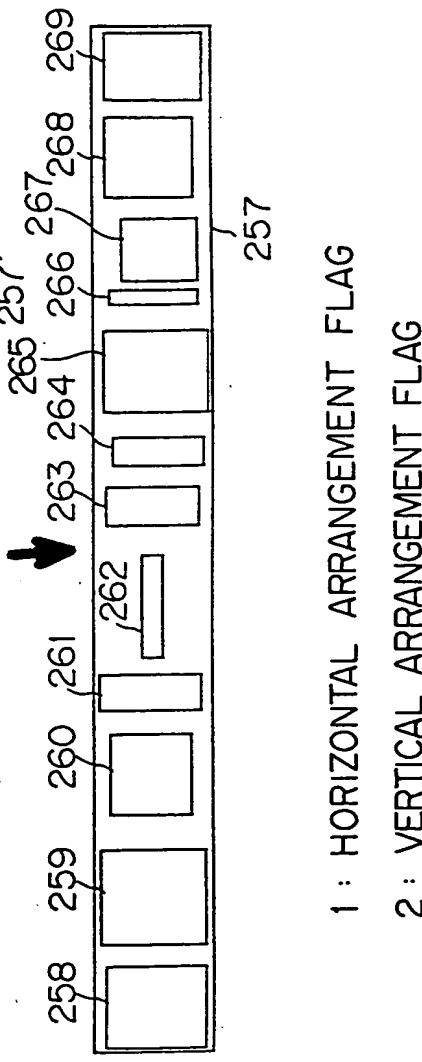


FIG. 40 B



1 : HORIZONTAL ARRANGEMENT FLAG

2 : VERTICAL ARRANGEMENT FLAG

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

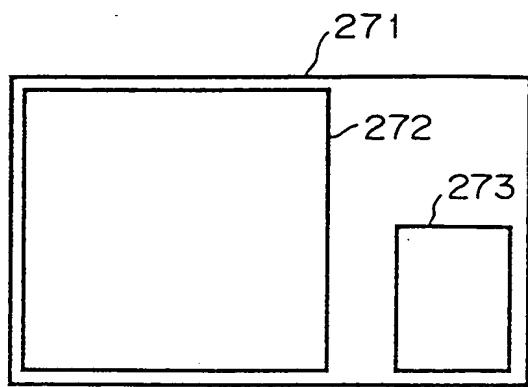
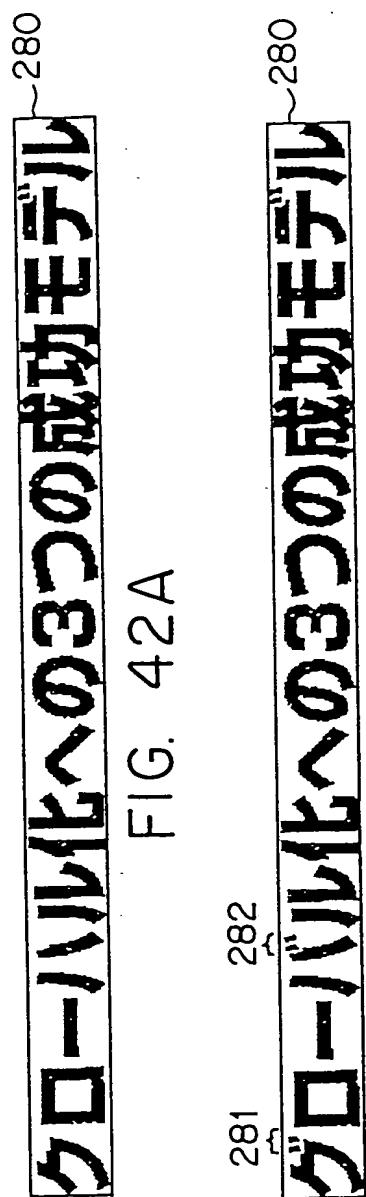


FIG. 41

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D



TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

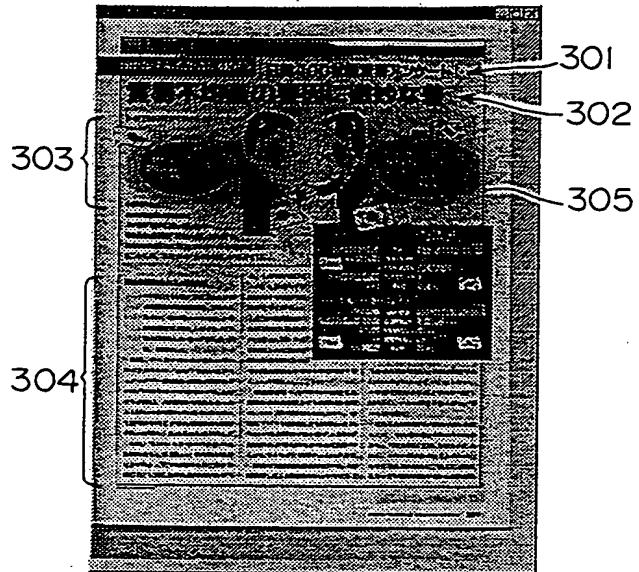


FIG. 43A

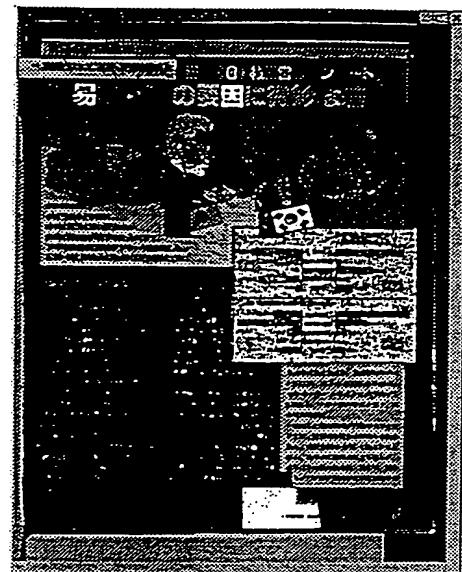


FIG. 43B

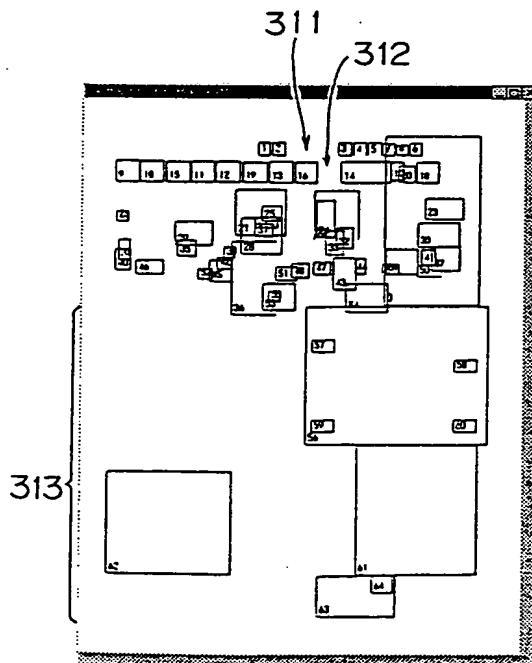


FIG. 43C

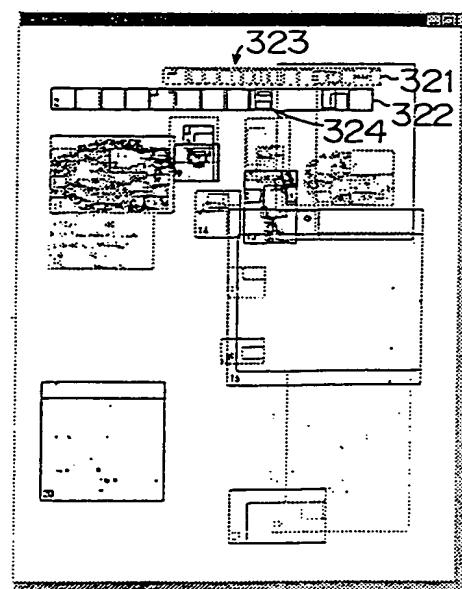


FIG. 43D

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

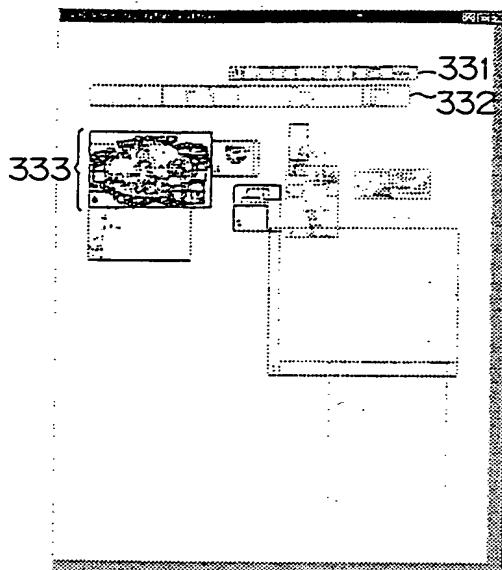


FIG. 44A

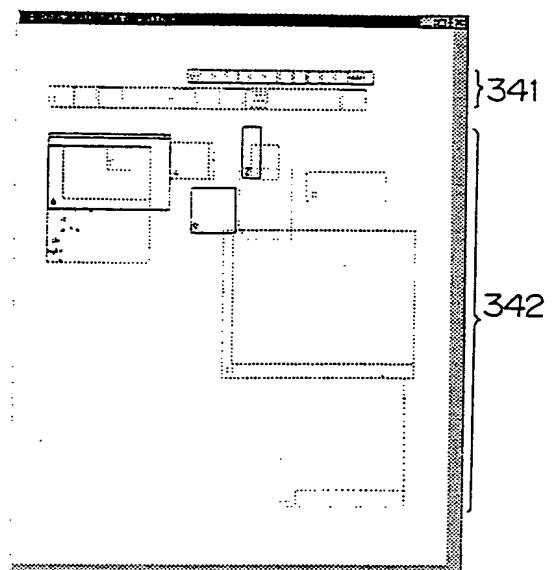


FIG. 44.B

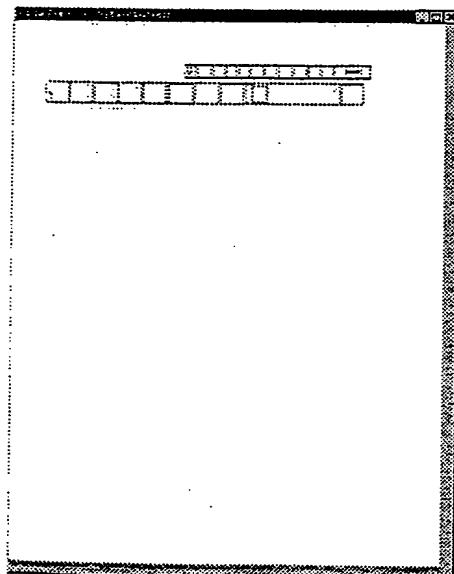


FIG. 44C

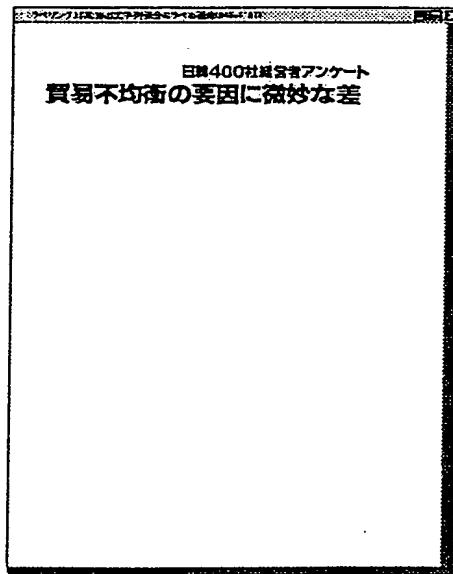


FIG. 44D

TITLE: COLOR IMAGE PROCESSING
APPARATUS AND PATTERN EXTRACTING
APPARATUS
INVENTORS: Yutaka KATSUYAMA
SERIAL NO.: Unassigned
DOCKET NO.: 826.1526D

FIG. 45A 質易不均衡の要因に微少な差

FIG. 45B 日韓400社経営者アンケート